

CLAIMS

What is claimed is:

1. A syringe assembly comprising:

a barrel of one of a cyclic olefin containing polymer and a bridged polycyclic olefin containing polymer, the barrel including an inner surface defining a chamber to contain flowable materials, the chamber having an opening; and,

5 an elastomeric piston slidably attached to the body and providing a seal of the chamber, the elastomeric piston having a parylene coating on an outer surface thereof.

2. The assembly of claim 1, wherein the elastomeric piston is steam sterilized.

3. The assembly of claim 1, wherein the elastomeric component is a synthetic rubber selected from the group consisting of styrene-butadiene copolymers, acrylonitrile-butadiene copolymers, neoprenes, butyl rubbers, polysulfide elastomers, urethane rubbers, stereo rubbers, ethylene-propylene elastomers.

4. The assembly of claim 3, wherein the synthetic rubber is a halogenated butyl rubber.

5. The assembly of claim 1, wherein the body is e-beam sterilized.

6. The assembly of claim 1, wherein the piston has a plurality of annular lobes providing multiple seal areas with said inner surface of said barrel.

7. The assembly of claim 6, wherein the annular lobe adjacent a distal end of the piston has a radius which is greater than a radius of the annular lobe located adjacent a proximal end of the piston.

8. The assembly of claim 1, further comprising a plunger rod having a first mating member which engages a second mating member of the piston to removably connect the plunger rod to the piston.

9. The assembly of claim 8, wherein the first mating member of the plunger rod has a series of threads having a major diameter and a minor diameter, wherein the second mating member has a series of threads having a major diameter and a minor diameter, and wherein the major and minor diameters of one of the first and second mating members are smaller than the major and minor diameters of the other of the first and second mating members.

10. The assembly of claim 9, wherein a thread pitch for the first mating member is the same as the thread pitch for the second mating member.

11. The assembly of claim 6, wherein the annular lobe adjacent a distal end of the piston has a diameter which is greater than a diameter of the annular lobe located adjacent a proximal end of the piston.

12. A piston assembly for use in a flowable materials container comprising:

a piston having a proximal end, a distal end, and a cavity extending into the piston at the proximal end thereof, wherein a first mating member is located in the cavity, and wherein the first mating member comprises one of a plurality of male and female threads,

a plunger rod having a second mating member comprising the other of the plurality of male and female threads, wherein the first mating member engages the second mating member, and wherein a major diameter and a minor diameter of one of the first and second mating members is larger than the major diameter and minor diameter of the other of the first and second mating members.

13. The piston assembly of claim 12, wherein the first mating member and the second mating member have the same thread pitch.

14. The piston assembly of claim 12, further comprising a plurality of annular ribs extending radially outward from an outer surface of the piston.

15. The piston assembly of claim 12, wherein at least one of the annular ribs has a radius at an edge thereof which is smaller than the radius of another of the annular ribs.

16. The piston assembly of claim 12, wherein the piston is coated with a parylene coating.

17. The piston assembly of claim 12, wherein the piston is made of an elastomeric material.

18. The piston assembly of claim 17, wherein the piston is made of a halogenated butyl rubber.

19. The piston assembly of claim 18, wherein the piston assembly is positioned in a syringe body made of a cyclic olefin containing polymer or a bridged polycyclic olefin containing polymer.